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COLONY OF SEYCHELLES.

ANNUAL REPORT

OF THE

MEDICAL AND HEALTH

DEPARTMENT

FOR THE YEAR

1951.

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At the Government Printing Office
Victoria, Mahé—Seychelles

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ANNUAL REPORT OF THE MEDICAL AND HEALTH DEPARTMENT FOR THE YEAR 1951.

TO HIS EXCELLENCY THE GOVERNOR
GOVERNMENT HOUSE,
SEYCHELLES.

I have the honour to forward the Report on the Medical and Health Department of Seychelles for your information and for transmission to the Rt. Hon. the Secretary of State for the Colonies.

Medical Headquarters,
Seychelles, 16th April, 1952.

JAMES TAYLOR,
Senior Medical Officer.

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1. ADMINISTRATION

A. *STAFF :*

A. Dr. James Taylor, M. B., Ch. B., D. P. H., D. T. M. & H., Senior Medical Officer arrived in the Colony and assumed duty on 24th March, 1951.

B. Dr. P. M. Joseph acted as Senior Medical Officer until 23rd March, 1951.

C. Dr. E. Christianson left the Colony on leave (prior to transfer to North Borneo) on 15th April, 1951.

D. Dr. A. O. MacKenzie left the Colony on leave on 15th September, 1951.

E. Dr. K. K. Kapadia returned from leave and assumed duty on August 1st 1951.

F. Dr. E. R. Simpson, M. B., B. S. (London) arrived in the Colony and assumed duty as Medical Officer on 11th November, 1951.

G. Mr. R. de la Coudraye Harter assumed duty as full time Government Dental Surgeon on 1st January, 1951.

H. Sister William, Religious Nursing Sister, left the Colony for study leave in the United Kingdom on 1st August, 1951.

I. Sister B. M. Robertson arrived in the Colony on secondment from Kenya on 11th November, 1951 and assumed duty as Relief Sister Tutor.

J. Dr. P. M. Joseph left the Colony on 22nd December, 1951, for study leave in the United Kingdom.

ESTABLISHMENT 1951.

1. Senior Medical Officer in Charge.
6. Medical Officers.
2. Dental Surgeons.
1. Senior Health Inspector.
1. Matron, Seychelles Hospital.
1. Superintendent, Curieuse Leper Settlement.

B. LEGISLATION.

The following legislation, which has a bearing on medical or public health matters, was made in 1951.

Ordinance.

The Animals (Diseases and Importations) (Amendment) Ordinance 1951 (No. 8 of 1951).

SUBSIDIARY LEGISLATION.

(a) The Nurses Registration (Amendment) Regulations 1951.
(b) The Animals (Diseases and Importations) Regulations 1951.
(c) The Animals (Diseases and Importations) (Amendment) Regulations 1951.

(d) The Animals (Diseases and Importations) Ordinance 1950. Notice of coming into Force.

(e) The Midwives (Amendment) Regulations 1951.

(f) The Lunacy (Mental Hospital) Regulatioss 1951.

(g) The Midwives (Amendment No. 2) Regulations 1951.

(h) The South Mahé Market Regulations 1951.

(i) The Victoria Slaughter House Regulations 1951.

C. *FINANCE :*

The following table shows the expenditure and revenue of the Medical Department for 1951 and the two preceding years. All figures shown are in Rupees.

	1951	1950	1949
Revenue ...	57,148	40,000	46,704
Estimated Expenditure ...	419,902	421,865	425,956
Actual Expenditure ...	494,892	377,057	392,123
Total Expenditure of the Colony ...	4,211,892	3,240,903	3,038,787
Medical Expenditure per head of the population ...	13.54	10.60	11.11

2. PUBLIC HEALTH

A. *GENERAL.*

One pictures a tropical country as in the grip of malaria, yellow fever, schistosomiasis, yaws, filaria and possibly of sleeping sickness. From that point of view Seychelles is a healthy land for none of the diseases mentioned above (with the exception of a rare case of filaria) occurs in the islands. And yet it cannot be said that Seychelles has a healthy population.

In 1950 there were 1.3 attendances at out-patient clinics per head of the population. This fell in 1951 to 1.16 but this figure is still outstandingly high and reflects the "Hospital conscious" menfality of the people. Even the in-patient figures indicate that in 1950 approx. 10% of the population were in hospital at some part of the year and this figure excludes mental and leper cases in the Mental Hospital and Curieuse Leper Settlement respectively. In 1951 the in-patient figure fell to approx. 9%. Something like half of these in-patients were suffering from diseases which are regarded as preventable — intestinal diseases due to parasites — venereal diseases and their sequelae — tuberculosis both of lungs and other parts — malnutrition and many others. The idea that such maladies could be prevented by suitable means from ever occurring does not seem to have taken root in Seychelles as yet : public health conceptions tend to be resisted and ridiculed. Yet such measures are what these islands need most of all — for if venereal disease, intestinal conditions and tuberculosis were brought under control there would be very little else of a communicable nature about which to worry and expenditure on curative services would be substantially reduced.

B. COMMUNICABLE DISEASES.

Intestinal Infestations.

These are very widespread throughout the Colony. To gauge their incidence accurately is difficult but some idea of this may be obtained from the following table which indicates the results of routine stool examinations carried out during the year by the laboratory. For comparison the percentage of the various parasites found in 1950 are given alongside.

Parasites		Number	% positive	% positive 1950
Routine stools examined	...	5732	—	—
Endamoeba Histolytica	...	427	7.4	6.4
Giardia Lamblia	...	796	13.8	12.8
Balantidium Coli	...	84	1.4	1.7
Ankylostoma	...	578	10.1	9.9
Ascaris	...	2186	38.0	35.9

It will be noted that, with small variations, the results for the two years run approximately parallel. When it is realised that the majority of the stools examined were from cases not obviously suffering from intestinal disease it can reasonably be inferred that the parasite rate is probably similar in the population as a whole. The debilitating effects of such infestations need no emphasis but in addition these parasites do cause serious and sometimes fatal disease.

Amœbic dysentery was diagnosed 414 times of which 82 were treated in hospital and 332 as out-patients. In addition there were some 547 cases of hepatitis — 127 cases being in-patients and 420 out-patients. Not all of these showed the endamoeba in the stool but the effects of treatment left little doubt that the majority of these were amoebic in origin. Lastly, 10 cases of liver abcess were admitted to hospital of which 2 cases required emergency surgery. The total number of amoebiasis cases was therefore 971.

In 1950 2277 cases of amoebic infestation were diagnosed but many of these were purely on clinical grounds. It would appear that the incidence of amowbiasis had dropped by over 66% but when the table of parasite incidence in stools is examined it is found that the incidence of this has actually risen by 1%. There appears to be a considerable reservoir of amoebic infestation among the population.

Other intestinal parasites occured in stool examinations as shown.

The treatment of these conditions without a corresponding improvement in sanitary conditions is of little value. Housing, sanitation and water supplies must all be brought under review together with the necessary public health education of the public. This is beyond the ability of the Seychelles, both from the financial point of view and with regard to the lack of adequately trained sanitation staff. Contact has therefore been established with the Africa Office of the World Health Organisation and an officer from that Organisation will visit the Colony early in 1952 to survey the position and recommend what programme of sanitation and public health education is necessary to combat the high incidence of intestinal parasites.

Meanwhile a new water supply to provide 10,000 people in or near Port Victoria with a safe piped water supply is almost ready to function. The water will be drawn from a catchment area which is devoid of human or animal population.

VENEREAL DISEASE

The number of recorded cases of venereal disease in 1951 has shown a marked decrease compared with 1950. In part this decrease is due to the use of penicillin in both diseases to a very much greater extent than before. In the past primary or secondary syphilis was invariably treated as an out-patient disease by weekly injections of an arsenical and it took at least one week and sometime much longer before the cases treated were non infective. In 1951 the practice of admitting infectious cases to hospital for penicillin treatment was begun and when these were discharged as out-patients ten to fourteen days later they were no longer infectious. The same procedure has been adopted, although not invariably, with cases of gonorrhoea.

The decrease in attendance of new cases cannot be attributed solely to the above procedures. In 1951 a Lady Health Visitor (who had done much to bring both new cases and cases on treatment to hospital) had to curtail her activities owing to ill health and later went on leave and was not replaced. It is unlikely that the drop in the incidence of venereal disease is as great as the figures given below would suggest.

SYPHILIS

New cases

Primary & Secondary	199
Tertiary	385
Congenital	49
	633

In the laboratory in 1951 4911 Kahn tests were carried out of which the vast proportion were routine cases with no obvious indication of syphilis. Of the 4911 tests 1147, or 23%, were positive. In 1950 38% of Kahns done were positive.

On the island of Silhouette a Medical Survey was carried out including Kahn tests on 438 persons of which 98 or 22% were positive.

Among the 474 women admitted to the Maternity Department of the Seychelles Hospital in 1951 10.7% were Kahn $^{++++}$. In 1950 the rate was 21%.

It would appear that syphilis has decreased. Until, however, notification of infectious disease is made legal and enforced it will be impossible to do more than make a reasonable guess at the incidence. From the above figures syphilis still appears to infect from 20 to 25% of the population.

GONORRHOEA

Total new cases	564	(1201 in 1950)
Adult Males	347	
Adult Females	180	
Ophthalmia	37	

Penicillin has almost replaced the older treatment by sulpha drugs with the result that cases are rendered non-infective in a matter of hours.

The drop in the number of cases treated is again thought to be due partly to the use of penicillin and partly to the absence for a great part of the year of the Lady Health Visitor. The ratio of male to female tends to bear this out ; it is this untouchable reservoir of gonorrhoea in certain types of women which keeps the incidence from falling still lower.

In 1951 61 cases of salpingitis were admitted to hospital most of which were gonorrhoeal in origin while 2 cases of ruptured pyosalpinx required urgent surgical treatment.

Gonorrhoea is still treated by non-medically qualified practitioners and many of these cases are given a false sense of security by this treatment. In 1951 the sale by traders of sulpha drugs and stovarsol was prohibited and these are now available only from a hospital or private practitioner.

The true incidence of gonorrhoea in the islands is unknown and can only be guessed. That it is considerable is obvious.

Two measures are contemplated in 1952. The first of these is a Venereal Disease Scheme which will be partly financed by the Colonial Development and Welfare Fund and partly by the Colony. Its aim is to break the ever-recurring cycle of infection by seeking out contacts and rendering them non infectious. Legislation to assist in this is proposed which, if passed, will give powers to treat compulsorily anyone found suffering from a venereal disease and also to require the examination of those suspected, as contacts of known cases, to be harbouring infection. It will make unlawful the treating of any venereal disease by anyone other than a registered medical practitioner. Secrecy will be sfrictly preserved and those preferring to go to a private practitioner will be allowed to do so provided that the practitioner certifies that the patient is cured or rendered non-infectious.

The second measure will be the making of Regulations for the Notification of Communicable Disease including Venereal Disease. It is hoped that this measure will provide statistics which will be nearer the truth than those now available.

TUBERCULOSIS

	1951	1950	1949
Pulmonary	75	60	103
Non pulmonury	9	24	19
Total	84	84	122

These figures are not a certain guide to the true incidence of this disease and it is planned to earry out an X-ray survey of 1,000 persons as a random sample with a view to assessing the true incidence of the disease in Seychelles.

There is no sanatorium and cases had to be treated in the general wards of the hospitals. This serious position will be remedied early in 1952 and separate accommodation for infectious turberculosis cases provided.

DIPHTHERIA

This occured three times in 1951 as against eight times in 1950 and three times in 1949.

Enteric fever was again absent from the Colony as in 1950.

Malaria was found in four cases all of which were imported as the anopheline vector of the disease does not occur in Seychelles.

Measles was found five times as against three in 1950.

Chickenpox dropped from 43 cases in 1950 to seven cases in 1951.

Filariasis was diagnoed twice in 1951 (once in 1950).

Leprosy : five new cases were diagnosed in 1951.

Influenza was recorded as occurring 85 times in 1951 which is a decrease on the recorded figure of 371 for 1950.

C. *VACCINATIONS AND INOCULATIONS*

The following table indicates the numbers carried out in 1951 as against 1950.

	1951	1950
Smallpox vaccinations	967	4,816
Yellow Fever Inoculations	410	296
Diphtheria Immunisations	26	1,195
T. A. B. Inoculations	47	47
Cholera Inoculations	161	—
Tetanus Immunisations	48	8

D. *HYGIENE AND SANITATION*

The Health Department of the Colony consists of one Senior Health Inspector assisted by five Inspectors and two probationers. Two labourers are employed mainly on oiling of water accumulations to limit mosquito breeding.

1. Inspection of Premises

A total of 9374 inspections were made during the year which resulted in the issue of 324 nuisance abatement orders for the following :—

I.	Removal of pigs or provision of proper styes	5
II.	Removal of pigs	15
III.	Insanitary latrines	105
IV.	Disrepair of latrines	39
V.	Accumulation of garbage	145
VI.	Water accumulations	8
VII.	Absence of latrines	7

2. Anti Mosquito Work

The anopheles mosquito is fortunately absent from the Colony but other mosquitoes, notably the Aedes Aegypti, exist and their control is regarded as essential in view of the Colony's proximity to a Yellow Fever Zone in East Africa. In 1951 there were 5612 inspections to detect the presence of mosquito breeding. The incidence of Aedes Aegypti was 2.8%. Oiling of drains, pools and other accumulations of water assisted in controlling mosquito breeding.

3. Food

Systematic inspection of food shops, bakeries, restaurants etc. was carried out during the year. 26 tins of food stuffs were condemned and destroyed. At the slaughter house the following animals were examined before sale to the public.

Cattle	46
Pigs	173
Turtles	379

The carcase of one bull and 31 turtles were found to be unfit for human consumption and were destroyed.

In addition 216 lbs of dried fish was found to be unfit and was also destroyed.

4. Port Work

All ships from overseas call at Port Victoria and these were examined for the possible presence on board of anopheles mosquitoes. Spraying of parts of these ships was carried out where considered necessary. One of the safeguards of the Colony is the fact that large ocean — going ships require to lie three miles out from the shore in consequence of coral reefs and this fact reduces the possibility of shipborne insects gaining access to the shore. All passengers from overseas are required to posess an International Certificate of Vaccination against smallpox and if from a Yellow Fever Endemic zone, a certificate of Innoculation against yellow fever also. Even transit passengers require to have these certificates seen before landing.

In 1951 63 ships grossing 155,360 tons passed through the port from overseas. They came from Aden, Bombay, Colombo, Cochin, Diego-Garcia, Maldive Islands, Mauritius, Mombasa and Zanzibar.

A quarantine station is maintained on Long Island and during the year it was used once only for a period of 24 hours while inoculation certificates were checked.

5. Legal Proceedings

Nine persons were summoned for failing to provide latrines and were required, after conviction, to pay fines totalling Rs. 91.00.

E. DENTAL HEALTH

A full time Government Dental Surgeon became available for the first time on 1st January, 1951, when Mr. R. de la Coudraye Harter assumed duty in that capacity.

The Dental Service is partly free and partly on a payment basis. The free groups are :—

(a) School Children
(b) Police constables
(c) Prisoners
(d) Civil Servants
(e) Hospital inmates in 3rd. Class Wards
(f) Poor persons who are unable to pay.

The paying section of the community comprises all sections of the community not included in the above categories. As there is no qualified Dental Surgeon in practice in the Colony this service must, of necessity, be carried on by the Government Dental Surgeon.

Apart from the Dental Surgeon himself the establishment of the Dental Department comprises a nurse, a dental mechanic and an apprentice dental mechanic.

In 1951 the Dental Department carried out the following :—

Schools

Extractions of deciduous teeth	768
Extractions of permanent teeth	125
Fillings	219
Scallings	7

These figures include dental attention to a small number of pre school age. Special cases treated in school-children were Vincent's gingivitis, alveolar abcess and one dentigerous cyst.

Free Dental Service

Extractions	2,568
Poor persons	1,991
Civil servants	502
Prisoners	55
Hospital immates	94
Policemen	16

Other Work in the free service

Alveolar abcess	17
Growths of muco-periosteum	5
Palatal abcesses	2
Fillings	3
Scalings	3
Vincent's gingivitis	2
Post extraction socket curettage and dressing	7
Osteo myelitis	1
Dentigerous cyst (containing rootless crown) removed	1
Fracture mandible (outside cause)	2
Maxillary sinus infection	4

Paying Section.

Conservative dental treatment approx.	500
Prosthetic treatment (dentures etc.)	100

In addition to the above Medical Officers carried out extraction of teeth at country hospitals and clinics.

F. *VITAL STATISTICS*

The table below gives relevant figures for 1951 and the three preceeding years.

	1951	1950	1949	1948
Estimated Population at Mid year --	36,533 E	35,703	35,361	34,847
Total Deaths	425	418	426	477
Death rate per 1000	11.6	11.7	12.1	13.7
Total Births	1,033	1,061	1,035	996
Birth rate per 1000	28.3	29.8	29.2	28.6
Total deaths under 1 year	52	64	73	94
Infant Mortality Rate	50.3	60.0	70.5	89.0

E = Estimated figure subject to confirmation.

The natural increase (births less deaths) is over 600 for the year 1951. For the preceding three years it was 643,609, and 519. With energetic public health measures it is highly probable that the birth rate will rise still further and the death-rate decline which will mean an even larger natural increase in the later years of this decade. Even at the present natural increase of 600 per annum Seychelles would be called upon to support a population of over 42,000 persons by 1961. It would appear, therefore, that by solving one problem we are producing another. This population crisis is, in any case, inevitable and anti V. D. schemes and similar disease-reducing factors simply accelerate the process and bring the crisis a little nearer in time.

The solution of this problem is not easy. If Seychelles has to carry this annually increasing number of mouths to feed the already low standard of life of the present population will be still further lowered by dilution of the amount available for subsistence. Emigration will assist but emigration postulates emigrants with reasonable education and the standard of this in Seychelles, although improving, is still low. Japan's solution to a similar problem was to legalise contraception, sterilisation and abortion. None of these would be acceptable in a country which is predominantly Roman Catholic. No solution is offered for none appears likely. But the population is still creeping up and up, and these few rocky islands with their limited resources cannot support many more human beings then they do to-day.

G. SCHOOL MEDICAL SERVICE

During the year 2,591 children were examined by medical officers. This is considerably below the number examined in 1950 which was 4,332 largely due to staff absences on leave during the year. The defects noted are tabulated below. Of the total children seen 1328 were boys and 1263 girls.

Conditions found	Number	% of total	% 1950	% 1949
Uncleanness	219	8%	—	—
Malnutrition	252	10%	4.2%	8.5%
Dental Caries	372	14%	—	—
Intestinal parasites	709	27%	39%	43.5%
Tonsils and Adenoids	186	7%	12.5%	8.5%
Cardiovascular disease	18	0. 7%	0.6%	0.6%
Eye defects	9	0.35%	0.3%	0.7%
Skin diseases	52	1. 9%	1.1%	—
Anaemia	230	9. 1%	8.5%	12.1%

3 MATERNITY & ANTE NATAL SERVICES

A. MATERNITY DEPARTMENT

Seychelles Hospital.

Women admitted during the year — 174.

Births	
Live	340
Still	37
Premature	14
Forceps deliveries	8
Breech deliveries	4
False labour	42
Prenatal conditions	23
Post natal conditions	7

Abortions	
Threatened	17
Complete	13
Incomplete	7
Ectopic pregnancy	2

Note. Abortions and ectopic pregnancies are treated in the General Wards and *not* in the Maternity Department.

Taxaemias of pregnancy	—
Caesarean Births	5

Deaths Maternal

Ruptured Uterus	1
Eclampsia	2

Deaths Infant

Prematurity	2

Kahn positive cases among women admitted were 44 or 10.7% of total.

B. *ANTE NATAL CLINIC AT VICTORIA HOSPITAL.*

First Attendances	337
Subsequent attendances	1,050
Khan † cases found	7.8%

C. *MATERNITY WORK IN OTHER HOSPITALS.*

	Anse Royale South Mahe	Bay Ste. Anne Praslin	Logan Hospital La Digue
Live Births	24	85	38
Still Births	—	4	2
Premature Births	1	1	3
Complicated Labour	—	1	2
False labour	3	—	—
Abortions	—	7	2

4. HOSPITAL AND DISPENSARIES.

The great majority of the sick in the Colony are treated at Seychelles Hospital in Port Victoria. This hospital, which has 110 beds, has a fully equipped laboratory and a small X-ray plant. There are also small hospitals at Bay Ste. Anne on Praslin Island and at La Digue and also at Anse Royale on Mahe. Clinics for the treatment of out-patients exist at Grand'Anse, Praslin and at Grand'Anse, Mahe. The latter is being replaced in 1952 with a stone building which will include accommodation for a limited number of maternity cases.

At Takamaka in South Mahe a Senior Nurse attends a clinic once weekly while at Bel-Ombre a clinic similarly operated was closed down in November, 1951. The table below indicates the number of patients treated at the various centres.

Hospital or Dispensary	Beds	In-Patients	Out-Patients
Victoria	110	3,075	27,660
Bay Ste. Anne	26	309	1,441
La Digue	8	67	1,779
Anse Royale	8	80	6,724
Grand'Anse Mahe	—	—	2.240
Grand'Anse Praslin	—	—	1,762
Takamaka	—	—	320
Bel-Ombre	—	—	345
Totals	152	3,531	42,291
Totals (1950)	148	3,709	49,315

SURGICAL

A. MINOR OPERATIONS PERFORMED

Out patients	505
In patients	148
Total	653

B. MAJOR OPERATIONS PERFORMED

Elective	120
Emergency	45
Total	165

ELECTIVE OPERATIONS WERE FOR :—			EMERGENCY OPERATIONS WERE FOR :—	
Appendicectomy		47	Appendicectomy	10
Hermiotomy		23	Strangulated Hernia	9
Hysterectomy		19	Caesarean Section	5
Hæmmorhoidectomy		6	Ectopic Pregnancy	3
Wounds		4	Perforated Gastric Ulcer	2
Amputations		5	Traumatic	5
Thigh	3		Intussusception	2
Arm	1		Omental Cyst	1
Fingers	1		Hysterectomy	1
Radical Mastectomy (Carcinoma)		2	Volvulus	1
Thyroidectomy		2	Splenectomy (Rupture)	1
Hare lip repair		1	Ruptured Pyosalpinx	2
Genito Urinary		3	Ruptured Liver Abcess	2
Laparatomy		1	Laparatomy	1
Miscellaneous		7		
Total		120		45

In addition a visiting Ophthalmologist performed a number of ophthalmic operations as under :—

Major operations	17
Minor operations	31
Total	48

C. X-RAY DEPARTMENT.

The only X-ray plant in the Colony is at the Seychelles Hospital. It is a Portable Watson Machine powered by a Leicester generator. In 1951 the following photographs were taken :—

Skull and jaw	12
Vertebrae and Pelvis	30
Arm and hand (with clavicle)	100
Leg and Foot	90
Ribs	2
Chest	185
Maxillary sinuses	8
Genito Urinary	10
Gastro Intestinal	3
Other	10
Total	450

In addition to the above a number of chest cases were screened for the presence of tuberculosis. Work was restricted by shortage of X-ray film.

D. MENTAL HOSPITAL

This institution is situated at Anse Royale, South Mahe and was originally built to accommodate 28 patients. The number of inmates for several years has exceeded this figure and a new mental hospital at Cannelles, a mile or two from the present hospital, will be constructed in 1952.

1951 figures for the Mental Hospital are as follows :—

Patients	Male	Female	Total
Resident at 1.1 51	21	13	34
On trial at 1.1.51	1	8	9
Total at 1.1.51	22	21	43
Admissions 1951	2	1	3
Deaths 1951	2	1	3
Re-admission from trial	—	1	1
Recovered on trial	1	—	1
Resident at 31.12.51	20	14	34
On trial at 31 11.51	2	7	9
Total at 31.12.51	22	21	43

The marital status of patients in residence or on trial during the year was as follows :—

	Male	Female	Total
Married	5	9	14
Single	17	12	29
Widow	—	1	1
Widower	1	—	1

The conditions for which patients were admitted include those arising from syphilis, melancholia, manic depressive psychosis, senile dementia and cases of congenital defect. Treatment of these was not attempted but in several cases with a syphilitis background penicillin was tried and several improved markedly one case of G. P. I. recovering sufficiently be allowed out on trial. His clinical improvement was reflected in a similar improvement in the reactions of his blood and Cerebro Spinal fluid.

E. CURIEUSE LEPROSY COLONY

The station, in which certain cases of leprosy are treated, lies on the island of Curieuse which is close to Praslin being separated from it by a narrow strait. Part of this island is used for this purpose, the remainder being a Government farm maintained by the Department of Agriculture but the two sections are quite distinct and apart.

Captain H. Bromley, M. B. E., an Officer seconded from the British Empire Leprosy Relief Association in London, was Superintendent of the Leprosy Colony until late in July 1951 when he proceeded on leave to the United Kingdom. He was succeeded as Superintendent by Lt. Cmdr. Clifford R. N. (Retd.) who assumed duty on August 1st. 1951.

At 31st December, 1951 there were in the Leper Colony 29 male patients and 18 female patients making a total of 47. During the yea there were 3 admissions — 1 male and 2 females. Two patients were discharged during the year and there were no deaths.

Until 1951 treatment was by sulphetrone but in the beginning of that year the drug D. A. D. P. S. was substituted. 21 males and 16 females were on this drug during the year and a sharp look out was kept for signs of toxicity in these cases. A few complained of headaches and neuralgic pains but no anaemias of any severity were found. Iron mixtures were administered to all D. A. D. P. S. cases. Most of these cases showed signs of improvement although bacteriological improvement lagged behind. In November 1951 an examination in detail of every case was carried out by the Medical Officer, Praslin and on the basis of this examination the Leprosy Board recommended the release of three cases if their bacteriological tests remained negative for three months. It is evident now that treatment of early cases results in a high proportion of cures and the once hopeless attitude of lepers has been replaced by one of hope and anticipation.

The Medical Officer Praslin visited the station once weekly (and occasionally on emergency call) when he examined patients on treatment, dealt with other minor illnessess and carried out minor surgical procedures.

The Health Inspector Praslin also made periodical visits to the station and dealt with matters of a sanitary nature. Antimosquito measures included introduction of larvae eating fish into the swamp and water reservoir : the filling in of several depressions and the oiling of others and the burial of tins, etc likely to contain water and to breed mosquitoes.

The shop maintained in the camp for the benefit of patients and staff continued in operation throughout the year while the recreation room assisted in keeping the patients occupied. All patients receive small sums monthly as pocket money and the more fit among them do light work and are paid for this in addition.

Curieuse is a small station when compared to Molokai, Culion or Makogai but but it serves a very useful function and the inmates are, in the main, contented. A few of the cases are completely burnt out and no longer infectious but as these have no homes in many cases they live on in the settlement which has become home to them.

TRAINING OF STAFF

TRAINING OF NURSES.

The training of probationer nurses at Seychelles Hospital proceeded in 1951. Applicants for these posts are required to have an educational standard not less than Standard VI and preferably higher. They are interviewed by a Selection Board consisting of the Senior Medical Officer and Matron assisted by two local ladies. Those selected are given a three months trial after which a further weeding out process occurs. The survivors then do a three years course of training after which they sit the final examination and if successful pass out as trained nurses. Following this every trained female nurse must do a twelve months course in midwifery. Midwives who are not trained nurses do eighteen months before passing out as trained midwives.

2. Sister William, a Religious Nursing Sister, acted as Sister Tutor until August 1st 1951, when she proceeded on overseas leave with a view to undertake a course of study in the duties of a Senior Tutor at Edinburgh. Miss M. B. Cahill, Matron of the Seychelles Hospital, carried on tutorial duties in addition to normal work until the arrival of Miss B. M. Robertson, a Relief Sister Tutor on secondment from Kenya, in November, 1951.

3. At 1st January. 1951 there were in training 36 probationeer Nurses and 5 male dressers. Two of the male dressers fell out during the year because of ill health and one female probationer resigned after completing two years training. During the year 12 probationers were accepted for training.

4. In 1951 —

8 probationers passed the final examination
9 probationers passed preliminary examination
8 midwives passed the midwifery examination.

Unfortunately the general standard of education in the Colony is still low, a fact which makes the training of probationers difficult. Language barriers enhance this difficulty, But in spite of these obstacles it is possible to produce each year a number of knowledgable and capable nurses. The Senior Medical Officer, Medical Officers, Matron and Sister Tutor all take a hand in giving lectures and practical work in the wards. The object of the training school is slowly to raise the standard of candidates accepted and training given until it is equal to that of the English S. R. N. This will not be easy but it is the desired goal.

Improved terms of pay and conditions of service were introduced for all grades of Nurses in November, 1951. These and the new Nurses Home should attract more candidates to the nursing profession.

6. On 31st December the numbers of registered Nurses and Midwives on the respective Registers were :—

Nurses	30
Midwives	40

LABORATORY SERVICE

In 1950 the laboratory at Seychelles Hospital was restricted in its activities to certain procedures which were :—

1. Routine Urine tests
2. Miscroscopic Stool Examinations
3. Smears for Gonococci
4. Sputa for tubercle bacilli
5. Kahn Tests
6. Blood counts.

Mr. H. W. Cotton, Laboratory Technician, arrived in November, 1950 and immediately set about reorganising the laboratory and ordering new equipment to extend to procedures which the laboratory could undertake. The cost of these, together with the salary of the technician himself, was paid from Colonial Development and Welfare Funds (Scheme No. D 1336).

In 1951 the services now available have increased by almost 300% over 1950 and now include bacteriology including cultures, haemotology including blood grouping, serology and biochemistry. Histology is not yet available but apparatus to make this possible is on order and it is anticipated that this service will be available in 1952. In addition an Aerogen Gas Plant is on order and when installed will provide gas to various taps in the laboratory building. This gas plant will, it is calculated, save on monies spent on heating fuels.

Below is given a list of the procedures carried out in 1951.

Specimen	*Examination*	*Number carried out.*
A. URINES	1. Routine	2,694
	2. Microscopic	584
	3. Bacteriological	47
	4. Chemical (other than routine)	300
	5. Urea	2
B. FAECES	1. Miscroscopic	5,732
	2. Bacteriological	50
	3. Chemical	13
C. BLOOD	1. Haemoglobin	245
	2. Red cell counts	206
	3. Differentail counts	172
	4. White cell counts	206
	5. Grouping "a" and "B"	66
	6. Rh factor "anti D"	50
	7. Sugar	23
	8. Urea	9
	9. Fragility	1
	10. E. S. R.	307
	11. Bleeding time	1
	12. Coagulation time	2
	13. Van den Bergh	4
	14. Platelets	1
	15. Reticulocytes	2
	16. Uric acid	1
	17. Cultures	8

Specimen		*Examination*	*Number carried out.*
	18.	Malaria parasites	33
	19.	Filaria	12
	20.	Widals	35
	21.	Kahn tests	4,911
D. SPUTA	1.	For Tubercle Bacilli	500
	2.	Culture for organisms	21
	3.	Culture for Tub. Bacilli	2
	4.	Stain for organisms	395
E. PUS	1.	Stain for organisms	44
	2.	Stain-Ziehl Nielsen	46
	3.	Culture for organisms	44
	4.	Culture for Tub. Bacilli	7
F. GASTRIC ANALYSES	1.	Fractional test meals	30
G. SWABS	1.	Throat swabs for Vincents	47
	2.	Swabs culture for KLB.	40
	3.	Swabs culture for Strept.	40
	4.	Cervical smear for G. C.	215
	5.	Urethral smears for G. C.	64
	6.	Eye swabs for organisms	21
	7.	Eye swabs culture	21
H. CEREBRO SPINAL FLUIDS	1.	Cells	20
	2.	Chlorides	11
	3.	Globulin	30
	4.	Kahn tests	19
	5.	Culture	20
I. PLEURAL FLUIDS	1.	For cells	11
	2	Culture for organisms	11
	3.	Culture for Tub. Bacilli	2
J. WATER SUPPLIES	1.	Standard Bacterial Count and B. Coli	15
K. VACCINES	1.	Autogeneous vaccines	35
L. DARK FIELD EXAMINATION	1	For Sp. Pallida	47

In addition there were several examinations done dealing with the parasite content of compost, infection in oysters etc. For the Veterinary department 100 tests of various types were carried out. In 1951 the total tests carried out numbered 17,557.

The laboratory also carries out inoculations against cholera, yellow fever, diphtheria and typhoid as well as the administration of tetanus toxoid. Sterile distilled water is prepared in the Laboratory for hospital purposes, sterile glucose salines likewise and emetine for injection is also prepared. The blood transfusion apparatus is maintained by the laboratory.

CONCLUSION

It was stated in the conclusion to the 1950 Annual Medical Report for Seychelles that the Colony could be made into a very healthy place. This is again stated and the measures to reduce venereal disease and intestinal parasites must, in the course of a few years, have a material effect on disease incidence. Apart from these groups the only other problem appears to be tuberculosis of which the incidence is again uncertain and a chest X-ray survey planned for 1952 will provide a more accurate idea of how this disease affects the population.

Attached to this Report are appendices indicating the number of cases of various diseases diagnosed and treated during the year together with a list of Causes of Death with appropriate numbers under the International Classification Scheme.

In addition Appendix C shows the results of a Medical Survey of the Island of Silhouette in August 1951, while Appendix D is a report by Dr. A. J. Pullar, an Opthalmologist from Kenya, who visited the Colony from September to November 1951 and examined and treated a number of both private and Government patients. It will be noted that this report mentions venereal disease as a cause of eye maladies in the Seychelles.

APPENDIX A.

Total number of cases of individual Diseases Diagnosed and treated.

1950 and **1951**

Disease	1950	1951
Typhoid fever	—	—
Paratyphoid fevers	—	—
Meningitis	1	2
Scarlet fever	—	—
Wooping cough	—	49
Diphtheria	3	3
Tetanus	5	6
Tuberculosis (pulmonary)	60	86
Tuberculosis (other)	24	18
Leprosy	5	8
Diarrhoea & Enteritis	1314	937
Dysentery (bacillary)	2	13
Dysentery (amoebic)	431	430
Dysentery (other)	159	74
Dysentery (unclassified)	95	146
Malaria	5	4
Venereal Disease :		
Syphilis : Primary & secondary	266	199
Tertiary	894	285
Congenital	77	49
Gonorrhoea	1201	564
Influenza (complicated)	—	8
Influenza (umcomplicated)	371	116
Measles	3	5
Chickenpox	43	8
Ankylostomiasis	224	177
Other Helmenthic disease	1279	603
Filariasis	1	3
Abcess of the liver	39	9
Other diseases of the liver	844	480
Tumors — Malignant	11	23
Non malignant	29	15
Unspecified	8	17
Rheumatic conditions	1107	577
Diabetes	29	21
Disease of Endocrine glands	10	7
Beriberi	—	—
Other Vitamin deficiency disease	57	51
Disease of blood & blood forming tissues	473	264
Poisoning — Alcoholic	3	5
Other	5	1
Mental disease	9	2
Trachoma	3	—
Other eye disease	364	297
Disease of the ear & mastoid sinus	365	196
Disease of Nervous system	483	388
Heart Disease	149	143

APPENDIX A. — *(Continued.)*

1950 and 1951

Disease	1950	1951
Bronchitis (acute)	652	735
Bronchitis (chronic)	693	188
Other disease of Circulatory System	193	86
Pneumonia — Broncho	75	35
Pneumonia — Lobar	32	16
Pneumonia — Unspecified	27	17
Other disease of respiratory system	1101	357
Nephritis (acute)	4	2
Nephritis (chronic)	4	7
Other non Venereal disease of the Genito-Urinary System	963	536
Abortions	47	51
Other conditions of puerperium	—	—
Ulcers (unspecified)	95	208
Other skin disease	1574	629
Disease of Bones etc.	209	158
Congenital Debility	5	—
Congenital malformations	3	—
Disease of early infancy	—	—
Premature Birth	26	3
Insury at Birth	—	—
Other conditions	6	3
Senility	119	151
Violence — Homicide	—	—
Suicide	—	—
Other	395	240
Ill defined causes	297	70
Other causes	3052	4621
Tonsillitis	216	234
Other Disease of the Digestive System	210	240

APPENDIX B

Cause Groupe			Detailed List Numbers.	
A	1	Tuberculosis of Respiratory System	001—008	40
A	2	Tuberculosis of meninges and central nervous system	010	1
A	5	Tuberculosis all other forms	014—019	1
A	6	Congenital syphilis	020	5
A	8	Tabes dorsalis	024	2
A	10	All other syphilis	022, 023, 026—029	10
A	16	Dysentery, all forms	045—048	9
A	21	Diphtheria	055	1
A	26	Tetanus	061	4
A	41	Ankylostomiasis	129	4
A	42	Other diseases due to helminths	124, 126, 128—130	5
A	44	Malignant neoplasm of buccal cavity and pharynx	140—148	1
A	47	Malignant neoplasm of intestine except rectum	152—153	6
A	48	Malignant neoplasm of the rectum	154	1
A	50	Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	162—163	1
A	51	Malignant neoplasm of the breast	170	3
A	52	Malignant neoplasm of cervix uteri	171	2
A	53	Malignant neoplasm of other and unspecified parts of the uterus	172—174	7
A	57	Malignant neoplasm of all other and unspecified sites	155—160, 164—165, 175—176, 178—181, 192—195, 198, 199	4
A	60	Benign neoplasms and neoplasms of unspecified nature	210—239	1
A	62	Thyrotoxicosis with or without goitre	252	1
A	63	Diabetes Mellitus	260	2
A	65	Anaemias	290—293	3
A	66	Allergic disorders. all other endocrine, metabolic and blood diseases	240—245, 253—254, 270—277, 287—289, 294—299	4
A	67	Psychoses	300—309	3
A	69	Mental deficiency	325	1
A	70	Vascular lesions affecting central nervous system	330—334	17
A	71	Nonmeningococcal meningitis	340	2
A	81	Arteriosclerotic and degenerative heart diseases	420—422	13
A	82	Other heart diseases	430—434	42
A	83	Hypertension with heart disease	440—434	4
			Carried forward	200

APPENDIX B. — (*Continued*).

		Cause Groups	Detailed List Number.	
			Brought forward	200
A	84	Hypertension without mention of heart	444—447	1
A	86	Other diseases of circulatory system	460—468	1
A	89	Lobar pneumonia	490	5
A	90	Broncho pneumonia	491	6
A	91	Primary atypical, other & unspecified pneumonia	492, 493	6
A	92	Acute bronchitis	500	3
A	53	Bronchitis, chronic & unqualified	501, 502	4
A	100	Ulcer of duodenum	541	1
A	101	Gastritis & duodenitis	543	2
A	103	Intestinal obstruction and hernia	560, 561, 570	1
A	104	Gastro-enteritis and colitis, except diarrhoea of the new born	571, 572	25
A	105	Cirrhosis of liver	581	4
A	107	Other diseases of digestive system	536—539, 542, 544, 545, 573—580, 582, 583, 586, 587	4
A	109	Chronic other and unspecified nephritis	591—594	2
A	114	Other diseases of genito-urinary system	601, 603, 605—609, 611—617, 622—637	2
A	120	Other complications of pregnancy, childbirth and the puerperium	645,—649, 673—680, 683. 687—689	1
A	122	Arthritis and spondylitis	720—725	1
A	126	All diseases of skin & musculoskeletal system	700—716, 731—736, 738—744	1
A	128	Congenital malformations of circulatory system	754	1
A	129	All other congenital malformations	750, 752, 753, 755—759	1
A	131	Postnatal asphyxia end atelectasis	762	1
A	132	Infections of newborn	770	1
A	134	All other defined diseases of early infancy	768, 771, 772	11
A	135	Ill defined diseases peculiar to early infancy, and immaturity unqualifie	773—776	7
A	136	Senility without mention of psychosis	794	75
A	137	Ill-defined and unknown causes of morbidity and mortality	780—793, 795	40
A	78	All other diseases of the nervous system and senre of organs	341—344, 350—352, 354—369, 380—384 386, 388—390, 394—398	7
AN	138	Fracture of skull	N 800 — N 804	3
AN	149	Effects of poison	N 960 — N 979	1
AB	150	All other and unspecified effects of external causes	N 950 — N 959, N 980 N 999	7
			Total.	425

APPENDIX C.

MEDICAL SURVEY OF SILHOUETTE ISLAND

Silhouett is one of the granitic islands of the Seychelles group and lies to the north east of Mahe, the distance by sea from Port Victoria being 17 miles. The island is approximately miles by miles and is mountainous. The main industry, carried on by the island owners, is copra production. All the inhabitants, who number 583 (August 1951) are employees of the owners. The population is mainly creole and the language spoken is the creole language which is a variant of French.

The survey was carried out by a Medical Officer (Dr. A. O. Mackenzie) and a laboratory assistant. Equipment to permit of microscopic work and Kahn reactions was taken over to the island. In the three weeks during which the survey was in progress 581 out of the total of 583 persons resident were examined. The owners of the island gave every facility in their power and co-operated by the provision of transport and in other ways.

The findings were :—

A. *INFECTIOUS DISEASE*

1. *Skin*

Ringworm	45
Scabies	33
	78

2. *Gonorrhoea*

Acute	4
Arthritis	6
	10

(This finding is in accordance with the apparant rule that gonorrhoea incidence varies inversely with distance from Port Victoria. Syphilis does not vary in this way).

3. *Syphilis*

Kahn reactions done	458
Reactions positive	98
% Reactions positive	22%

Age group of positive reactors :—

Under 20 years	11
20 — 30 years	12
30 — 40 years	33
Other age groups	42
	98

APPENDIX C. — (*Continued*).

4. *Intestinal parasites*

Stool examinations of all 581 cases showed :—

Endamœba Histolytica	37
Giardia Lamblia	68
Balantidium Coli	7
Strongyloides Stercoralis	21
Trichuris	233
Ascaris	211
Ankylostoma	33
	590

5. *Tuberculosis*

Clinical cases noted	Nil
Sputa examined for M. Tuber	62
Sputa for M. Tuberculosis	Nil

No X-ray facilities were available on the island.

B. *NON INFECTIOUS CONDITIONS FOUND*

1. *Heart disease* (valvular, myocardial etc.)	11
2. *Bronchitis*	43
Asthma	12

3. *Hæmotological Examinations* .

Red cell counts done	83
Red cell counts under 4 million	47
Hb estimations done	89
Hb under 80%	22
White cell counts done	5
Differential counts done	2

4. *Eye conditions*

Defective vision	21
Pterygia	10
Cataract	7

5. *Ear conditions*	2

6. *Dental conditions*

Persons with carious teeth	172
Carious teeth extracted	279
Diseased gums	49

APPENDIX C. — (*Continued*).

7. *Miscellaneous*

Exephthalmic goitre	1
Idiocy	1
Hydro cele	1
Elephantiasis	3
Inguinal hernia	1

CONCLUSION

The results of the above survey indicate quite clearly that a clinic for medical treatment should be opened on this island. Furthermore it is apparent that sanitary conditions must be attended to in view of the high rate of intestinal infestation.

APPENDIX D.

Report on Ophthalmic Work done by Dr. A J. Pullar on Kenya.

September — November, 1951.

During a visit of just over 9 weeks to the island of Mahe, Seychelles a total of 494 ophthalmic patients was seen, at the Seychelles Hospital, Victoria. Of this total, 254 were Government patients, and 240 private.

An analysis of the various conditions and diseases seen is appended, as well as a table showing the numbers of major and minor operations performed.

Some points of interest may be noted from the table of ocular diseases and conditions, In spite of the relatively small number of cases seen, no fewer than 28, or approximately 5% of the total, could be directly ascribed to acquired or congenital syphilis. Not only this, but several of the cataract cases, who had a Kahn test done, before operation, showed a positive reaction. As syphilis only gives rise to ocular manifestation in a fairly small percentage of cases, one is driven to the conclusion that venereal disease is a serious problem in the Seychelles.

The amount of allergic conjunctivitis encountered was also surprising. This was frequently seen, as might be expected, in conjunction with rhinitis, chronic nasal catarrh, hay fever and asthma. It was felt that the trial of one of the anti-histamine eye drops, such as Antistine-Privine "Ciba" might yield good results. The available supply of Antistine-Privine was so small, that the results from its use were inconclusive.

The almost complete absence of Trachoma is worthy of note. Unfortunately no corneal microscope was available in the Seychelles, so that a thorough search for pannus was not possible. Several cases had conjunctival scrapings taken, and these were examined for inclusion bodies, but none were seen. Several cases of granular conjunctivitis were treated with soluble sulphacetamide drops and 1% aureomycin ointment, but there was little if any improvement. If Trachoma is present in the Seychelles, it must be in a very mild and benign form. No cases of gross pannus or entropion were seen.

While no cases of actual deficiency disease were met with one got the impression that a fairly large number of the patients, particularly women, were not by any means 100% fit. Whether this is due to mild deficiency in the diet or to the climate, or to other more obscure psychological causees, is difficult to say. The lack of the Slit lamp made the research for corneal vascularisation. due to ariboflaviniosis, difficult, but some patients who complained of burning eyes and intolerance to light, were definitely improved by large doses of vitamin B complex.

As is usual in general ophthalmic work, a very large percentage of the cases seen were refractive errors and presbyopia. It was interesting to find that presbyopia made itself apparent at a much earlier age, in Seychelles, than in the United Kingdom. Where, in England, patients would come for their first pair of reading glasses at the age of about 45; in Mahe, one found many people of under 40 requiring spectacles for close work, because of presbyopia. The cause of this is a matter of conjecture. It may be due to the fact that many people seem to age more quickly in the tropics (in every way, or and this applies particularly to the Seychelles, to the admixture of varying amounts of coloured blood in the population). One has always found that presbyopia comes on at a relatively very early age in Asiatic and African patients.)

In conclusion, mention should be made of the great number of Pterygia seen. Seychelles enjoys an annual rainfall of 90—100 inches, and there is consequently little dust compared with South or East Africa. Yet Pterygium is three or four times as common as in Kenya, for example. The reason for this is again obscure. It may be due to some deficiency in the diet causing corneal degenerative changes, with secondary over-growth of the conjunctiva, but that is only to hazard a guess. This is a subject on which more investigation could profitably be carried out.

APPENDIX D. — (*Continued*).

As regards operative work, the lack of electricity, during the day, and the difficulty of darkening the Theatre effectively, while keeping the temperature within reasonable limits, increased the difficulties of ophthalmic surgery to some extent. Lighting deficiencies were largely overcome by using a hand electric torch but the problem of darkening the Theatre, while yet keeping it cool, was not satisfactorily solved.

To sum up, there are three ophthalmic diseases found in the Seychelles in much greater numbers than elsewhere; these are (1) Ocular manifestations of syphilis, (2) Allergic conditions and (3) Pterygium.

ANALYSIS OF CASES SEEN

September 10th — November 13th 1951.

	Condition	*Government*	*Private*
1.	Presbyopia	66	125
2.	Hypermetropia	6	15
3.	Myopia	8	10
4.	Hypermetropia Astigmatism	11	13
5.	Myopia Astigmatism	14	6
6.	Compound Hypermetropia Astigmatism	11	33
7.	Compound Myopia Astigmatism	11	20
8.	Mixed Astigmatism	11	10
9.	Allergic Conjunctivitis	22	14
10.	Aphakia	1	—
11.	Blepharitis	2	—
12.	Benign Melanoma of Conjunctiva	2	1
13.	Cataract	23	31
14.	Central Choroiditis	2	1
15.	Choroideo Retinitis	4	—
16,	Ciliary Staphyloma	1	—
17.	Corneal Dystrophy	3	1
18.	Chalazion	5	—
19.	Contusion of eye	1	—
20.	Corneal opacity	3	2
21.	Corneal Ulcer	—	1
22.	Diabetic Retinitis	—	4
23.	Dislocation of Lens	—	2
24.	Emphysema of orbit	1	—
25.	Epiphora	—	3
26.	Fibroma of eyelid	1	—
27.	Glaucoma	4	1
28.	Granular Conjunctivitis	2	—
29.	Headaches	2	—
30.	Iridocyclitis	1	—
31.	Iritis	9	2
32.	Interstitial Keratitis	2	—
33.	Leproma of conjunctivitis	1	—
34.	Migraine	2	1
35.	Muco-Purulent Conjunctivitis	8	5
36.	No Abnormality Discovered	15	11
37.	Nystagmus	—	1
38.	Optic Atrophy	7	—
39.	Paralytic Squint	1	—
40.	Phthisis bulbi	2	—

APPENDIX D. — (*Continued*).

	Condition	*Government*	*Private*
41.	Phlyctenular conjunctivitis	1	—
42.	Pinguecola	1	—
43.	Pterygium	19	9
44.	Senile Macular Degeneration	—	1
45.	Squint	—	1
46.	Superficial Punctate Kteratitis	1	—
47.	Trachoma	—	1
48.	Vitamin Deficiency	1	—
49.	Vitreous Opacities	2	1

OPERATIONS

		Government	*Private*
1.	Major	13	4
2.	Minor	24	7
	Totals	37	11

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